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80789771 - agriculture victoria.ST25
SEQUENCE LISTING

<110> Agriculture Victoria Services Pty Ltd
Australian Centre for Plant Functional Genomics Pty Ltd

<120> Modification of plant response to freezing and low temperature stress

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<150> 2003906477
<151> 2003-11-24

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<170> PatentIn version 3.2

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<213> Deschampsia antarctica

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 aataccgtat ctgggagcca caataccgta tctgggagcc acaataaccgt atctggaagc 240
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 tgtttccatc ttcctaacg aagctcatgt tcatgtccaa gctaataagt gtacctcaca 360
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 <213> Deschampsia antarctica

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 gccgtaacaa ggaaccacaa taccgtatcc gggagccata ataccgtacc tgggagccat 180
 aataccgtat ctgggagcca caataccgta tctgggagcc acaataaccgt atctggaagc 240
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<210> 20
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 <213> Deschampsia antarctica

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 gccgtaacaa ggaaccacaa taccgtatcc gggagccata ataccgtacc tgggagccat 180
 aataccgtat ctgggagcca caataccgta tctgggagcc acaataaccgt atctggaagc 240
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<210> 21
 <211> 449
 <212> DNA
 <213> Deschampsia antarctica

<400> 21
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 aataccgtat ctgggagcca caataccgta tctgggagcc acaataccgt atctggaagc 240
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 ttaaataaaa ctcccttaaa aaacaaaaa 449

<210> 22
 <211> 92
 <212> PRT
 <213> Deschampsia antarctica
 <400> 22

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 20 25 30
 His Val Val Thr Gly Asp Asn Asn Ala Val Thr Arg Asn His Asn Thr
 35 40 45
 Val Ser Gly Ser His Asn Thr Val Pro Gly Ser His Asn Thr Val Ser
 50 55 60
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<210> 23
 <211> 728
 <212> DNA
 <213> Deschampsia antarctica

<400> 23
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 aaaaacaaag tttgaactgg gaggcacttg tgggccttgt ggtcacggac tagctagtag 240
 tgaaccactt gcaacacatg cttacacaca cactataagt agcatgtacc acccaagtag 300
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 cttgtcggcg gcaggcgcaa catcgtgcc ccccgatgac ctccgcgcgc tgcaaagctt 480

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 gctccctacg cgcggccttg gagcatcctt ggcgggcctc acgcggcatg tgaaaggtaa 660
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 tggaagca 728

<210> 24
 <211> 702
 <212> DNA
 <213> Deschampsia antarctica

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 gtcgtgacag gaggttaatg atatgtccgt gcaggatgct tc 702

<210> 25
 <211> 498
 <212> DNA
 <213> Deschampsia antarctica

<400> 25
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 tacaagtttt gtgtagctca caatcacttg gtgggaccaa tcgcgatgtc atgtaacttc 420
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 aaaaaaaaaa aaaaaaaaaa 498

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<210> 26
 <211> 497
 <212> DNA
 <213> Deschampsia antarctica

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 aataatgtat ccgggagctt ccataaccgta tccgggaacc acaacacagt atctgggagc 240
 aataatactg tatcagggag caaccatgtc gtgtccggga gcaacaaagt cgtgacagga 300
 ggtaaatgat atgtccgtgc aggatgcttc catgttccct aaaggagatc gcggcattgt 360
 acaagttttg ttagctcac aatcacttgg tgggaccaat cgcgatgtca tgtaacttca 420
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<210> 27
 <211> 497
 <212> DNA
 <213> Deschampsia antarctica

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 aataatgtat ccgggagctt ccataaccgta tccgggaacc acaacacagt atctgggagc 240
 aataatactg tatcagggag caaccatgtc gtgtccggga gcaacaaagt cgtgacagga 300
 ggtaaatgat atgtccgtgc aggatgcttc catgttccct aaaggagatc gcggcattgt 360
 acaagttttg ttagctcac aatcacttgg tgggaccaat cgcgatgtca tgtaacttca 420
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<210> 28
 <211> 599
 <212> DNA
 <213> Deschampsia antarctica

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 gggaacgaca acaccgtcat atctgggaac aggaacattg tgtctgggag ctacaacacc 180
 gtcgtaactg ggagtataa taccataacc ggtagcaacc atgtcgtgtc tgggaagaac 240
 catatcgtaa ccgacaaca caacgccgta accgggcacg acaataatgt atccgggagc 300
 ttccataccg tatccgggaa ccacaacaca gtatctggga gcaataatac tgtatcaggg 360

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 agcaaccatg tcgtgtccgg gagcaacaaa gtcgtgacag gaggttaatg atatgtccgt 420
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<210> 29
 <211> 599
 <212> DNA
 <213> Deschampsia antarctica

<400> 29
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<210> 30
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 <213> Deschampsia antarctica

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 aaaaacaaag tttgaactgg gaggcacttg tgggccttgt ggtcacggac tagctagtac 240
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 taccacagct gaatccatgg cgccgaaatg ctggctgcta ctgctcttct cggcgcttct 420
 cttgtcggcg gcaggcgcaa catcgtgcca ccccgatgac ctccgcgcgc tgcaaagctt 480
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<210> 31
 <211> 217
 <212> PRT
 <213> Deschampsia antarctica

<400> 31

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Gln Ser Phe Ala Gly Asn Leu Gly Ser Pro Gly Gly Val Leu Pro Arg
 35 40 45

Ala Ala Trp Ser Gly Ala Ser Cys Cys Asp Trp Glu Gly Val Ser Cys
 50 55 60

Asp Gly Ala Ser Gly Arg Val Thr Ala Leu Arg Leu Pro Thr Arg Gly
 65 70 75 80

Leu Gly Ala Ser Leu Ala Gly Leu Thr Arg His Val Lys Gly Asn Arg
 85 90 95

Arg Thr Leu Ala Val Gln Pro Asn Thr Ile Thr Gly Thr Asn Asn Asn
 100 105 110

Val Arg Ser Gly Ser Asn Asn Val Val Ser Gly Asn Asp Asn Thr Val
 115 120 125

Ile Ser Gly Asn Arg Asn Ile Val Ser Gly Ser Tyr Asn Thr Val Val
 130 135 140

Thr Gly Ser Asp Asn Thr Ile Thr Gly Ser Asn His Val Val Ser Gly
 145 150 155 160

Lys Asn His Ile Val Thr Asp Asn Asn Asn Ala Val Thr Gly His Asp
 165 170 175

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 Asn Asn Val Ser Gly Ser Phe His Thr Val Ser Gly Asn His Asn Thr
 180 185 190

Val Ser Gly Ser Asn Asn Thr Val Ser Gly Ser Asn His Val Val Ser
 195 200 205

Gly Ser Asn Lys Val Val Thr Gly Gly
 210 215

<210> 32
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 <212> DNA
 <213> Deschampsia antarctica

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<210> 33
 <211> 878
 <212> DNA
 <213> Deschampsia antarctica

<400> 33
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 <212> DNA
 <213> Deschampsia antarctica

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 aaaatgtctt acaaaaaaaaa aaaaaaa 687

<210> 36
 <211> 687
 <212> DNA
 <213> Deschampsia antarctica

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<210> 37
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 <213> Deschampsia antarctica

<400> 37
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 <212> PRT
 <213> Deschampsia antarctica

<400> 38

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 35 40 45

Trp Ser Gly Asp Ser Cys Cys Gly Trp Glu Gly Val Gly Cys Asp Ser
 50 55 60

Ala Ser Gly Arg Val Thr Ala Met Leu Leu Pro Arg His Gly Leu Ala
 65 70 75 80

Lys Pro Val Pro Gly Ala Ser Leu Ala Ser Leu Ala Arg Leu Glu Glu
 85 90 95

Leu Phe Lys Arg Asn Arg Arg Thr Leu Glu Glu Gln Pro Asn Thr Ile
 100 105 110

Gln Gly Thr Asn Asn Asn Val Arg Asp Gly Cys Tyr Asn Ala Leu Ser
 115 120 125

Gly Asn Asp Asn Thr Val Ile Ser Gly Asn Asn Asn Thr Val Ser Gly
 130 135 140

Ser Phe Asn Thr Ile Val Thr Gly Cys His Asn Thr Val Ser Gly Ser
 145 150 155 160

Asn Gln Val Val Ser Gly Leu Asn His Ile Val Thr Asp Asp Asn Asn
 165 170 175

Asp Val Ser Gly Asn Asp Asn Asn Val Ser Gly Ser Phe His Thr Val
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180

185

190

Ser Gly Ser His Asn Thr Val Ser Gly Ser Asn Asn Thr Val Ser Gly
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Arg Asn His Val Val Thr Gly Ser Asn Lys Val Val Thr Gly Gly
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 <212> DNA
 <213> Deschampsia antarctica

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 <212> DNA
 <213> Deschampsia antarctica

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 <213> Deschampsia antarctica

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 <212> DNA
 <213> Deschampsia antarctica

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 gagccacaat accgtatctg ggagcaacaa taccgtatct gggagaaacc atgtcgtaac 660
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<210> 44
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 <213> Deschampsia antarctica

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<211> 832

<212> DNA

<213> Deschampsia antarctica

<400> 45

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<210> 46

<211> 223

<212> PRT

<213> Deschampsia antarctica

<400> 46

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Ala Ala Cys Ala Thr Ser Cys His Pro Asp Asp Leu His Ala Leu Arg
20      25      30

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Gly Phe Ala Gly Asn Leu Ser Gly Gly Gly Val Leu Pro Arg Ser Val
35      40      45

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Trp Ser Gly Asp Ser Cys Cys Gly Trp Glu Gly Val Gly Cys Asp Asp
50      55      60

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Ala Ser Gly Arg Val Thr Thr Met Trp Leu Pro Arg Arg Gly Leu Val
65      70      75      80

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Lys Pro Val Pro Gly Ala Ser Leu Ala Gly Val Thr Glu Leu Glu Glu
85      90      95

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Leu Ile Thr Arg Asn Arg Arg Ala Leu Glu Glu Gln Pro Asn Thr Ile
100     105     110

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Gln Gly Thr Asn Asn Asn Val Arg Asp Gly Cys Tyr Asn Ala Leu Ser
 115 120 125

Gly Asn Asp Asn Thr Val Ile Ser Gly Asn Asn Asn Thr Val Ser Gly
 130 135 140

Ser Phe Asn Thr Ile Val Thr Gly Cys His Asn Thr Val Ser Gly Ser
 145 150 155 160

Asn Gln Val Val Ser Gly Leu Asn His Ile Val Thr Asp Asp Asn Asn
 165 170 175

Asp Val Ser Gly Asn Asp Asn Asn Val Ser Gly Ser Phe His Thr Val
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Ser Gly Ser His Asn Thr Val Ser Gly Ser Asn Asn Thr Val Ser Gly
 195 200 205

Arg Asn His Val Val Thr Gly Ser Asn Lys Val Val Thr Gly Gly
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 <212> DNA
 <213> Deschampsia antarctica

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<210> 48
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 <212> DNA
 <213> Deschampsia antarctica

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 <213> Deschampsia antarctica

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<210> 50
 <211> 810

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<212> DNA

<213> Deschampsia antarctica

<400> 50

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<210> 51

<211> 810

<212> DNA

<213> Deschampsia antarctica

<400> 51

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<210> 52
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 <212> PRT
 <213> Deschampsia antarctica

<400> 54

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Gly Thr Ile Pro Ser Trp Ile Gly Glu Leu Asp His Leu Cys Tyr Met
 35 40 45

Asp Leu Ser His Asn Ser Leu Asp Gly Glu Val Pro Lys Ser Leu Gln
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Ile Arg Leu Arg Ala Leu Thr Thr Thr Gly Arg Ser Leu Gly Met Val
 65 70 75 80

Phe Ile Asn Met Pro Leu His Met Lys Arg Ser Arg Arg Thr Leu Gln
 85 90 95

Glu Gln Pro Asn Val Ile Thr Gly Thr Asn Asn Ser Val Arg Ser Gly
 100 105 110

Arg Asn Asn Val Val Ser Gly Asn Asp Asn Thr Val Ile Ser Gly Asn
 115 120 125

Asn Asn Val Val Ser Gly Ser His Asn Thr Val Val Thr Gly Ser Asp
 130 135 140

Asn Val Val Ser Gly Ser Asn His Val Val Ser Arg Thr Asn His Val
 145 150 155 160

Val Thr Asp Asn Asn Asn Ala Val Thr Gly Asn His Asn Thr Val Ser
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Gly Ser His Asn Thr Val Ser Gly Ser Asn Asn Val Val Ser Gly Ser
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Asn His Val Val Ser Gly Ser Asn Lys Val Val Thr Gly Gly
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 <212> DNA
 <213> Lolium perenne

<400> 55
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<210> 56
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 <213> *Lolium perenne*

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<210> 58
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 <212> DNA
 <213> *Lolium perenne*

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<210> 59
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 <213> Lolium perenne

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 <213> Lolium perenne

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<210> 61

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<211> 554

<212> DNA

<213> *Lolium perenne*

<400> 61

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gctgtagttg ggaaggtgtg ggatgcgacg gcggaagcgg ccgtgtcact acgttggtggc    240
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<210> 62

<211> 568

<212> DNA

<213> *Lolium perenne*

<400> 62

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<210> 63

<211> 569

<212> DNA

<213> *Lolium perenne*

<400> 63

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gctgtagttg ggaaggtgtg ggatgcgacg gcggaagcgg ccgtgtcact acgttggtggc    240
tccttgggca tggactcgca ggccacatcc caacagcatc cttggctggc cttgcacggc    300

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 agaatttaca aataaggctc aggtgcctca acatcggttg tcgttcactg ggcattggctt 480
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 caataaccgg gaccaataac tatgtcaga 569

<210> 64
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 <212> DNA
 <213> Lolium perenne

<400> 64
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 caataaccgg gaccaataac tatgtca 569

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 <211> 566
 <212> DNA
 <213> Lolium perenne

<400> 65
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 agaatttaca aataaggctc aggtgcctca acatcggttg tcgttcactg ggcattggctt 480
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<210> 66
 <211> 568

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<212> DNA

<213> Lolium perenne

<400> 66

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agaatttaca aataaggctc aggtgcctca acatcgttgg tcgttcaactg ggcatggctt      480
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<210> 67

<211> 568

<212> DNA

<213> Lolium perenne

<400> 67

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agaatttaca aataaggctc aggtgcctca acatcgttgg tcgttcaactg ggcatggctt      480
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<210> 68

<211> 568

<212> DNA

<213> Lolium perenne

<400> 68

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<210> 69
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 <212> DNA
 <213> Lolium perenne

<400> 69
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 <211> 539
 <212> DNA
 <213> Lolium perenne

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<210> 71
 <211> 539
 <212> DNA
 <213> Lolium perenne

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 <211> 539
 <212> DNA
 <213> Lolium perenne

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 <213> Lolium perenne

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 tgaagcataa ccaaataagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtcaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt 480
 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

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<210> 74
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 74
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt 480
 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 75
 <211> 323
 <212> DNA
 <213> Lolium perenne

<400> 75
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tct 323

<210> 76
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 76
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt 480

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 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 77
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 77
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt 480
 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 78
 <211> 482
 <212> DNA
 <213> Lolium perenne

<400> 78
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt 480
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<210> 79
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 79
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300

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ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360
tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat	420
ctatagagaa ttgtttccat attccctaac ggagttcacg tccttggtcca agctgggtgt	480
agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac	539

<210> 80
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 80 ggtgcctcaa catcgttggt cgttcactag gcatggcttc cactaacatg acattgcagg	60
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atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga	180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg	240
gtaacaacca tgtcgtaca aggaaccaga atactgtatc tgggagccat cataaagtat	300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360
tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat	420
ctatagagaa ttgttaccat attccctaac ggagttcacg tccttggtcca agctgggtgt	480
agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac	539

<210> 81
 <211> 218
 <212> DNA
 <213> Lolium perenne

<400> 81 ggtgcctcaa catcgttggt cgttcactgg gcatggcttc cactaacatg acattgcagg	60
tgaagcataa ccaaatagca ctaagtggc aaccaaacac aataaccggg accaataact	120
atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga	180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtct	218

<210> 82
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 82 ggtgcctcaa catcgttggt cgttcactgg gcatggcttc cactaacatg acattgcagg	60
tgaagcataa ccaaatagca ctaagtggc aaccaaacac aataaccggg accaataact	120
atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caaactgtc acatccggga	180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg	240
gtaacaacca tgtcgtaca aggaaccaga atactgtatc tgggagccat cataaagtat	300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360

WO 20

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 tatctgggag gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa attccctaac ggagttcacg tccttgcca agctgggtgt 480
 agctaaatat ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 83
 <211> 539
 <212> DNA
 <213> Lolium

<400> 83
 ggtgcctcaa cat cgttactgg gcatggcttc cactaacatg acattgcagg 60
 tgaagcataa cca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggc aatgttgttt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgt aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgt aaggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caata tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caacc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgttt attccctaac ggagttcacg tccttgcca agctgggtgt 480
 agctaaatat cacttg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 84
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 84
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtcaac aatgttgttt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgcca agctgggtgt 480
 agctaaatat cacttgggtg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 85
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 85
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 tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tggggtcaac aatgttgttt ctgggaacca caacactgtc acatccggga 180

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acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg	240
gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat	300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360
tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat	420
ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt	480
agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac	539

<210> 86
 <211> 524
 <212> DNA
 <213> Lolium perenne

<400> 86	
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tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact	120
atgtcagatc tggggtaaac aatgttggtt ctgggaacca caacactgtc acatccggga	180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg	240
gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat	300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360
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ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt	480
agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcg	524

<210> 87
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 87	
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tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact	120
atgtcagatc tggggtaaac aatgttggtt ctgggaacca caacactgtc acatccggga	180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg	240
gtaacaacca tgtcgttaaca aggaaccaga atactgtatc tgggagccat cataaagtat	300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag	360
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ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt	480
agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac	539

<210> 88
 <211> 539
 <212> DNA
 <213> Lolium perenne

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<400> 88
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 tgaagcataa ccaaataagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
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 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt 480
 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 89
 <211> 539
 <212> DNA
 <213> *Lolium perenne*

<400> 89
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 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt 480
 agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 90
 <211> 539
 <212> DNA
 <213> *Lolium perenne*

<400> 90
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 tgaagcataa ccaaataagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
 atgtcagatc tgggggtcaac aatgttggtt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt 480

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agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 91
<211> 539
<212> DNA
<213> Lolium perenne

<400> 91
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tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
atgtcagatc tggggtaaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
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agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 92
<211> 539
<212> DNA
<213> Lolium perenne

<400> 92
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tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
atgtcagatc tggggtaaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
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gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300
ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
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agctaaatat cacttggtgg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 93
<211> 539
<212> DNA
<213> Lolium perenne

<400> 93
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tgaagcataa ccaaatagca ctaagtgggc aaccaaacac aataaccggg accaataact 120
atgtcagatc tggggtaaac aatgttggtt ctgggaacca caaactgtc acatccggga 180
acaacaatgt tgtgtctgga aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
gtaacaacca tgtcgtaaca aggaaccaga atactgtatc tgggagccat cataaagtat 300

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ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacatc gtacatggga acaacaaagt cgtgacagga ggttaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgtcca agctgggtgt 480
 agctaaatat cacttgggtg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 94
 <211> 537
 <212> DNA
 <213> Lolium perenne

<400> 94
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 aagcataacc aaatagcact aagtgggcaa ccaaacacaa taaccgggac caataactat 120
 gtcagatctg gggtaacaa tgttgtttct gggaaccaca aactgtcac atccgggaac 180
 aacaatgttg tgtctggaaa ccacaacacc gtgtctggga ccaaccatgt tgaactggt 240
 aacaaccatg tcgtaacaag gaaccagaat actgtatctg ggagccatca taaagtatct 300
 ggaggccaca atactgtatc tgggagccac aataccgtat ctggaagcca caacacagta 360
 tctgggagca accacatcgt acatgggaac acaaagtcg tgacaggagg ttaacaatct 420
 atagagaatt gtttccatat tccctaacgg agttcacgct cttgtccaag ctgggtgtag 480
 ctaaatatca cttgggtggg ccaatggcgt tatgtaactt cgtggatata gcatcac 537

<210> 95
 <211> 536
 <212> DNA
 <213> Lolium perenne

<400> 95
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 agcataacca aatagcacta agtgggcaac caaacacaat aaccgggacc aataactatg 120
 tcagatctgg ggtcaacaat gttgtttctg ggaaccacaa cactgtcaca tccgggaaca 180
 acaatgttgt gtctggaaac cacaacaccg tgtctgggac caaccatgtt gtaactggta 240
 acaaccatgt cgtacaagg aaccagaata ctgtatctgg gagccatcat aaagtatctg 300
 gagggccacaa tactgtatct gggagccaca ataccgtatc tggaagccac aacacagtat 360
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 tagagaattg tttccatatt ccctaacgga gttcacgtcc ttgtccaagc tgggtgtagc 480
 taaatatcac ttggtggggc caatggcggt atgtaacttc gtggatatag catcac 536

<210> 96
 <211> 532
 <212> DNA
 <213> Lolium perenne

<400> 96
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 taaccaaata gactaagtg ggcaaccaa cacaataacc gggaccaata actatgtcag 120
 atctgggggtc aacaatgttg tttctgggaa ccacaacact gtcacatccg ggaacaacaa 180
 tgttgtgtct ggaaaccaca acaccgtgtc tgggaccaac catgttgtaa ctggtaacaa 240
 ccatgtcgta acaaggaacc agaatactgt atctgggagc catcataaag tatctggagg 300
 ccacaatact gtatctggga gccacaatac cgtatctgga agccacaaca cagtatctgg 360
 gagcaaccac atcgtagatg ggaacaacaa agtcgtgaca ggagggttaac aatctataga 420
 gaattgtttc catattccct aacggagttc acgtccttgt ccaagctggg tgtagctaaa 480
 tatcacttgg tggggccaat ggcgttatgt aacttcgtgg atatagcatc ac 532

<210> 97
 <211> 532
 <212> DNA
 <213> Lolium perenne

<400> 97
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 taaccaaata gactaagtg ggcaaccaa cacaataacc gggaccaata actatgtcag 120
 atctgggggtc aacaatgttg tttctgggaa ccacaacact gtcacatccg ggaacaacaa 180
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 <213> Lolium perenne

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 gaattgtttc catattccct aacggagttc acgtccttgt ccaagctggg tgtagctaaa 480
 tatcacttgg tggggccaat ggcgttatgt aacttcgtgg atatagcatc ac 532

<210> 99

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<211> 526
 <212> DNA
 <213> Lolium perenne

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 ccacatcgta catgggaaca acaaagtcgt gacaggaggt taacaatcta tagagaattg 420
 tttccatatt ccctaacgga gttcacgtcc ttgtccaagc tgggtgtagc taaatatcac 480
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<210> 100
 <211> 399
 <212> DNA
 <213> Lolium perenne

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<210> 101
 <211> 1391
 <212> DNA
 <213> Lolium perenne

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<210> 102
 <211> 279
 <212> PRT
 <213> Lolium perenne

<400> 102

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Arg Gly Phe Ala Gly Asn Leu Ser Asn Gly Gly Val Leu Leu His Ala
35 40 45

Lys Trp Pro Asp Asn Ser Cys Cys Ser Trp Glu Gly Val Gly Cys Asp
50 55 60

Gly Gly Ser Gly Arg Val Thr Thr Leu Trp Leu Pro Gly His Gly Leu
65 70 75 80

Ala Gly His Ile Pro Thr Ala Ser Leu Ala Gly Leu Ala Arg Leu Glu
85 90 95

Ser Leu Asn Leu Ala Asn Asn Lys Leu Val Gly Thr Ile Pro Ser Trp
100 105 110

Ile Gly Val Leu Asp His Leu Cys Tyr Leu Asp Leu Ser Asn Asn Ser

115 80789771 - agriculture victoria.ST25
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 Asn Ile Val Gly Arg Ser Leu Gly Met Ala Ser Thr Asn Met Thr Leu
 145 150 155 160
 Gln Val Lys His Asn Gln Ile Ala Leu Ser Gly Gln Pro Asn Thr Ile
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 Thr Gly Thr Asn Asn Tyr Val Arg Ser Gly Val Asn Asn Val Val Ser
 180 185 190
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<210> 103
 <211> 568
 <212> DNA
 <213> *Lolium perenne*

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<210> 104
 <211> 568
 <212> DNA
 <213> *Lolium perenne*

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 <211> 568
 <212> DNA
 <213> *Lolium perenne*

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<210> 106
 <211> 568
 <212> DNA
 <213> *Lolium perenne*

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caataaccgg gaccaataac tatgtcag 568

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<211> 568
<212> DNA
<213> *Lolium perenne*

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caataaccgg gaccaataac tatgtcag 568

<210> 108
<211> 568
<212> DNA
<213> *Lolium perenne*

<400> 108
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<210> 109
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 <212> DNA
 <213> Lolium perenne

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 caataaccgg gaccaataac tatgtcag 568

<210> 110
 <211> 568
 <212> DNA
 <213> Lolium perenne

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<210> 111
 <211> 570
 <212> DNA
 <213> Lolium perenne

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<210> 112
 <211> 568
 <212> DNA
 <213> *Lolium perenne*

<400> 112						
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<210> 113
 <211> 569
 <212> DNA
 <213> *Lolium perenne*

<400> 113						
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<210> 114
 <211> 552
 <212> DNA
 <213> *Lolium perenne*

<400> 114
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<210> 115
 <211> 536
 <212> DNA
 <213> *Lolium perenne*

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<210> 116
 <211> 488
 <212> DNA
 <213> *Lolium perenne*

<400> 116
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<210> 117
 <211> 494
 <212> DNA
 <213> Lolium perenne

<400> 117
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 ctcgccaaca acaaactggt cggcacaatc ccatcatgga tgggtgtgct tgaccacctt 300
 tgctacttgg atctctcaaa taattcattg gttgggtgaga tacccaagaa ttacagaga 360
 aggctcagtt gccccaacat tgttggatcat tcaactgggta cggcttcac taacatgcca 420
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 aataactatg tcag 494

<210> 118
 <211> 539
 <212> DNA
 <213> Lolium perenne

<400> 118
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 atgtcagatc tgggggtcaac aatgttgttt ctgggaacca caacactgtc acatccggga 180
 acaacaatgt tgtgtctggg aaccacaaca ccgtgtctgg gaccaaccat gttgtaactg 240
 gtaacaacca tgtcgttaaca aggaaccaga ataccgtatc tgggagccat cataaagtat 300
 ctggaggcca caatactgta tctgggagcc acaataccgt atctggaagc cacaacacag 360
 tatctgggag caaccacgtc gtacacggga acaacaaagt cgtgacagga ggtaacaat 420
 ctatagagaa ttgtttccat attccctaac ggagttcacg tccttgcca agctgggtgt 480
 agctaaatat cacttgggtg ggccaatggc gttatgtaac ttcgtggata tagcatcac 539

<210> 119
 <211> 980
 <212> DNA
 <213> Lolium perenne

<400> 119
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 tgccggcggc gagcgtggcg gtgtcgtgcc accctgatga cctccttgca ctgcgagggt 120

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tcgccggttaa tctcagcaat gggggcggtcc tcttccatgc caagtgggtc ggcaactctt 180
gctgtagttg ggaaggtgtg ggatgcgacg gcggaagcgg ccgtgtcact actttatggc 240
tccgtgggca tggactcgca ggccacatcc caacagcatc cttggctggc cttgcacggc 300
tggagtcgct caacctcgcc aacaacaaac tggtcggcac aatcccatca tggatgggtg 360
tgcttgacca cctttgctac ttggatctct caaataattc attggttggg gagataccca 420
agaatttaca gagaaggctc agttgcccc aattgttggt tcattcactg ggtacggctt 480
ccactaacat gccattgcag gtgaagcata accaaatagc actgagtggg caaccaaaaca 540
caataaccgg gaccaataac tatgtcagat ctgggggtcaa caatgttggt tctgggaacc 600
acaacactgt cacatccggg aacaacaatg ttgtgtctgg gaaccacaac accgtgtctg 660
ggaccaacca tgttgtaact ggtaacaacc atgtcgtaac aaggaaccag aataccgtat 720
ctgggagcca tcataaagta tctggaggcc acaatactgt atctgggagc cacaataccg 780
tatctggaag ccacaacaca gtatctggga gcaaccacgt cgtacacggg aacaacaaag 840
tcgtgacagg aggttaacaa tctatagaga attgtttcca tattccctaa cggagttcac 900
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cttcgtggat atagcatcac 980

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<210> 120
 <211> 279
 <212> PRT
 <213> Lolium perenne

<400> 120

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 20 25 30

Arg Gly Phe Ala Gly Asn Leu Ser Asn Gly Gly Val Leu Leu His Ala
 35 40 45

Lys Trp Phe Gly Asn Ser Cys Cys Ser Trp Glu Gly Val Gly Cys Asp
 50 55 60

Gly Gly Ser Gly Arg Val Thr Thr Leu Trp Leu Arg Gly His Gly Leu
 65 70 75 80

Ala Gly His Ile Pro Thr Ala Ser Leu Ala Gly Leu Ala Arg Leu Glu
 85 90 95

Ser Leu Asn Leu Ala Asn Asn Lys Leu Val Gly Thr Ile Pro Ser Trp
 100 105 110

Met Gly Val Leu Asp His Leu Cys Tyr Leu Asp Leu Ser Asn Asn Ser
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115 80789771 - agriculture victoria.ST25
 120 125
 Leu Val Gly Glu Ile Pro Lys Asn Leu Gln Arg Arg Leu Ser Cys Pro
 130 135 140
 Asn Ile Val Gly His Ser Leu Gly Thr Ala Ser Thr Asn Met Pro Leu
 145 150 155 160
 Gln Val Lys His Asn Gln Ile Ala Leu Ser Gly Gln Pro Asn Thr Ile
 165 170 175
 Thr Gly Thr Asn Asn Tyr Val Arg Ser Gly Val Asn Asn Val Val Ser
 180 185 190
 Gly Asn His Asn Thr Val Thr Ser Gly Asn Asn Asn Val Val Ser Gly
 195 200 205
 Asn His Asn Thr Val Ser Gly Thr Asn His Val Val Thr Gly Asn Asn
 210 215 220
 His Val Val Thr Arg Asn Gln Asn Thr Val Ser Gly Ser His His Lys
 225 230 235 240
 Val Ser Gly Gly His Asn Thr Val Ser Gly Ser His Asn Thr Val Ser
 245 250 255
 Gly Ser His Asn Thr Val Ser Gly Ser Asn His Val Val His Gly Asn
 260 265 270
 Asn Lys Val Val Thr Gly Gly
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<210> 121
 <211> 472
 <212> DNA
 <213> Deschampsia antarctica

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 catggtatca ctcaattatt actctgagta ggcattgggtg acaagtacct ctccagcaca 180
 gctccaatcc tacatgtggt agctgacaac aagcagcttg agtgcttgcc acccacgaat 240
 tccagtcgac agaaaacacc aaaaaccaag cttgaattgg gaggcagttt gtgggccttg 300
 tggtcacgga ctagtattag accacttgca atgcatgctt acaaacatac acgcacacta 360
 taagtaagat gtaccacca agcagttttt aacaacaacg cttgtgaatc acttccattc 420
 caaaaaggtt tcttgccgaa tccatatata gcataccacg gctgaatcca tg 472

<210> 122
 <211> 1404

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<212> DNA

<213> Deschampsia antarctica

<400> 122

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aaagaatggtt acaagtgcct gcaagggaaa ttcatggaag gatcttaaag atagtgcctat      180
acccggaagt cgagctcgct ctactagcag ggagccatga tcagcttcaa ccttcgcgaa      240
tctacgcgcc atgtccatta gctggcaaga aagaggctgc acagaaataa ttattcttag      300
tatcccgctg tgccagaata ggctcggggg ctacattagg ataaaaaga taagggtgcg      360
gaacttacgt tttctatgcg aggaggaggt gaaggctctg gagtcgaagt tttctcctcc      420
cgcattgattg tcttctcagg tgaagacttc aaagcttcac catgggtccac caacctccgc      480
gcttcacatg cggaagtggc tgcgactcc atacccttc tcggggggtt agctaagtca      540
tcttcccctt cggatctggt gtttatattt gtatgtgtgg ttttattttt caaagctgat      600
acgatggttg ctaaataata caggctacaa ataggatata ctttctcta ctctcccgct      660
tattaatctt catatgtatg tgtgcatgta tgatgtatca aagtagagca tgcatagggc      720
ttgtgcaccc cttggtagcc tcgatgacct tgacctgtg ttgtttggtg gcatcgaatc      780
gattgcgaga aaatagtaag tttctcaatc tgatcagcca gacaccgaac atattatttg      840
gtaataaatg acggcgattc acaatttttc aataatcgtg tagaattagt tggcttaaca      900
aaagtcggca cattaggccg gtcacgatgt gtcgtctcat ccgagaaatt ccatgtcaac      960
cacatcgtct aggttcgtat cgtttatttt gacgtctgca taataagatc ttcctaggat     1020
attttggttc tctgcgtgca ctggaactgt aggcgcgagg tatcactcac ttgttactct     1080
gccaaaggcat gggtgacaag tacctctcca gtcagttcc aaccctatat gcggtagctg     1140
acgaagggca gcttgagtcg atgccacca cgaatttcag tcgacagaca acacaaaaa     1200
ccaagtttga attgggaggc acctgtgggc cttgtgggtc cggactagct agtactgaac     1260
cacttgcgac acatgcttac acacacacac acacacacta taagtagcat gtaccacca     1320
agtagttttt aacaacaaca cttgcgaatc acttgcatc caaaaaagtt cattcctgag     1380
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<210> 123

<211> 420

<212> DNA

<213> Lolium perenne

<400> 123

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ttgagtgttg taaaattggg aattacaact atactatttt cgtatgggaa caatttggtt      180
atttttgtgt ctctctttct cttcatagct agctgacagc gagaacaaaa accaagatct      240
aattgtggaa gtagactagt agtcgaccac ccatgcatgc ttacataaga aaacacacgc      300

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actataagat tggatgcacc acccaagcac tataaaaagg atgcaccacc taagcaattt 360
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<210> 124
 <211> 118
 <212> PRT
 <213> Lolium perenne

<400> 124

Asp Glu Gln Pro Asn Thr Ile Ser Gly Ser Asn Asn Thr Val Arg Ser
 1 5 10 15

Gly Ser Lys Asn Val Leu Ala Gly Asn Asp Asn Thr Val Ile Ser Gly
 20 25 30

Asp Asn Asn Ser Val Ser Gly Ser Asn Asn Thr Val Val Ser Gly Asn
 35 40 45

Asp Asn Thr Val Thr Gly Ser Asn His Val Val Ser Gly Thr Asn His
 50 55 60

Ile Val Thr Asp Asn Asn Asn Asn Val Ser Gly Asn Asp Asn Asn Val
 65 70 75 80

Ser Gly Ser Phe His Thr Val Ser Gly Gly His Asn Thr Val Ser Gly
 85 90 95

Ser Asn Asn Thr Val Ser Gly Ser Asn His Val Val Ser Gly Ser Asn
 100 105 110

Lys Val Val Thr Asp Ala
 115

<210> 125
 <211> 285
 <212> PRT
 <213> Triticum aestivum

<400> 125

Met Ala Lys Cys Gly Leu Leu Leu Leu Phe Leu Ala Phe Leu Leu Pro
 1 5 10 15

Ala Ala Arg Ala Thr Ser Cys His Pro Asp Asp Leu Arg Ala Leu Arg
 20 25 30

Gly Phe Ala Gly Asn Leu Ser Gly Gly Ala Ala Leu Leu Arg Ala Ala
 35 40 45

Trp Ser Gly Ala ser Cys Cys val Trp Glu Gly Val Asn Cys Asp Gly
 50 55 60

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 Thr Ser Gly Arg Val Thr Ala Leu Arg Leu Pro Gly His Gly Leu Val
 65 70 75 80

Gly Leu Ile Pro Gly Ala Ser Leu Ala Gly Leu Ala Arg Leu Glu Glu
 85 90 95

Leu Asn Leu Ala Asn Asn Lys Leu Val Gly Thr Ile Pro Ser Trp Ile
 100 105 110

Gly Glu Leu Asp His Leu Cys Tyr Leu Asp Leu Ser Asp Asn Ser Leu
 115 120 125

Val Gly Glu Val Pro Lys Ser Leu Ile Arg Leu Lys Gly Leu Val Ile
 130 135 140

Ala Gly His Ser Leu Gly Met Val Phe Thr Asn Met Pro Leu Tyr Val
 145 150 155 160

Lys Arg Asn Arg Arg Thr Leu Asp Glu Gln Pro Asn Thr Ile Ser Gly
 165 170 175

Ser Asn Asn Thr Val Arg Ser Gly Ser Thr Asn Val Val Ser Gly Asn
 180 185 190

Asp Asn Thr Val Ile Ser Gly Asn Asn Asn Asn Val Ala Gly Ser Asn
 195 200 205

Asn Thr Val Ile Thr Gly Asn Asp Asn Thr Val Thr Gly Ser Asn His
 210 215 220

Val Val Ser Gly Asp Lys His Ile Val Thr Asp Asn Asn Asn Ala Val
 225 230 235 240

Ser Gly Asn Asp Asn Asn Val Ser Gly Ser Phe His Thr Val Ser Gly
 245 250 255

Ser His Asn Thr Val Ser Gly Thr Asn Asn Thr Val Ser Gly Ser Asn
 260 265 270

His Val Val Ser Gly Ser Asn Lys Val Val Gly Asp Glu
 275 280 285

<210> 126

<211> 430

<212> PRT

<213> Hordeum vulgare

<400> 126

Met Ala Arg Cys Trp Leu Leu Leu Leu Leu Cys Ala Phe Leu Trp Pro
 1 5 10 15

Ala Val Ser Ala Thr Pro Cys His His His Asp Leu His Ala Leu Arg
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20

25

30

Gly Phe Ala Glu Glu Leu Gly Gly Gly Gly Ala Leu Leu Arg Thr Ala
 35 40 45

Trp Ser Gly Ala Ser Cys Cys Asp Trp Glu Gly Val Gly Cys Asp Gly
 50 55 60

Ala Thr Gly Arg Val Thr Ala Leu Arg Leu Pro Gly His Gly Leu Ala
 65 70 75 80

Gly Pro Ile Pro Gly Ala Ser Leu Ala Gly Leu Val Trp Leu Glu Glu
 85 90 95

Leu Phe Leu Gly Ser Asn Ser Phe Val Gly Val Leu Pro Asp Glu Leu
 100 105 110

Phe Gly Leu Ala Arg Leu Arg Lys Leu Ser Leu Ala Ser Asn Glu Leu
 115 120 125

Thr Gly Glu Leu Ser Pro Arg Leu Gly Glu Leu Thr Arg Leu Thr Ser
 130 135 140

Leu Asp Leu Ser Asp Asn Arg Phe Ser Gly Arg Leu Pro Asp Val Phe
 145 150 155 160

Asp Asp Leu Thr Ser Leu Glu His Leu Ala Ala His Ser Asn Asp Phe
 165 170 175

Ser Gly Phe Leu Pro Pro Ser Leu Ala Ser Leu Ser Ser Leu Arg Glu
 180 185 190

Leu Asn Leu Arg Asn Asn Ser Met Ser Gly Pro Ile Ala Arg Val Ser
 195 200 205

Phe Ser Gly Met Pro Phe Leu Ser Ser Val Asp Phe Ser Thr Asn His
 210 215 220

Leu Thr Gly Trp Leu Pro Thr Ser Leu Ala Ala Cys Gly Glu Leu Arg
 225 230 235 240

Ser Leu Asn Leu Ala Asn Asn Thr Leu Val Gly Asn Ile Pro Ser Trp
 245 250 255

Met Gly Glu Phe Asp Arg Leu Trp Tyr Leu Asp Leu Ser Asn Asn Ser
 260 265 270

Phe Val Gly Glu Val Pro Arg Ser Leu Ile Arg Leu Met Asp Leu Thr
 275 280 285

Thr Val Gly Thr Ser Pro Gly Ile Ala Leu Ser Asn Leu Pro Leu Tyr
 Page 60

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290

295

300

Val Asn His Asn Arg Arg Thr Leu Asp Glu Gln Pro Asn Thr Ile Thr
305 310 315 320

Gly Thr Asn Asn Thr Val Arg Ser Gly Arg Asn Asn Thr Met Ser Gly
325 330 335

Asn Asp Asn Thr Val Met Ser Gly Asp Asn Asn Ala Val Ser Gly Ser
340 345 350

Phe Asn Thr Leu Val Cys Gly Asp Asn Asn Val Leu Thr Gly Asp His
355 360 365

His Val Val Ser Gly Ser Asn His Ile Val Thr Asn Ser Tyr Asn Lys
370 375 380

Val Ser Gly Cys Thr Asn Asn Val Ser Gly Ser Asn His Thr Val Ser
385 390 395 400

Gly Ser Asn Asn Thr Val Ser Gly Ser Ser Asn Thr Val Ser Gly Ser
405 410 415

Asn His Ile Val Ser Gly Ser Asn Lys Ile Val Thr Gly Gly
420 425 430

<210> 127
<211> 1010
<212> PRT
<213> Oryza sativa

<400> 127

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Leu Phe Ala Leu Leu Pro Phe Pro Pro Ala Ala Ala Ala Pro Cys His
20 25 30

Pro Glu Asp Leu Leu Ala Leu Arg Ala Phe Ala Gly Asn Leu Ser Ala
35 40 45

Gly Gly Gly Gly Ala Gly Leu Arg Ala Ala Trp Ser Gly Asp Ala Cys
50 55 60

Cys Ala Trp Asp Gly Val Ala Cys Asp Ala Ala Ala Arg Val Thr Ala
65 70 75 80

Leu Arg Leu Pro Gly Arg Gly Leu Glu Gly Pro Ile Pro Pro Ser Leu
85 90 95

Ala Ala Leu Ala Arg Leu Gln Asp Leu Asp Leu Ser His Asn Ala Leu
100 105 110

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Thr Gly Gly Ile Ser Ala Leu Leu Ala Ala Val Ser Leu Arg Thr Ala
 115 120 125
 Asn Leu Ser Ser Asn Leu Leu Asn Asp Thr Leu Leu Asp Leu Ala Ala
 130 135 140
 Leu Pro His Leu Ser Ala Phe Asn Ala Ser Asn Asn Ser Leu Ser Gly
 145 150 155 160
 Ala Leu Ala Pro Asp Leu Cys Ala Gly Ala Pro Ala Leu Arg Val Leu
 165 170 175
 Asp Leu Ser Ala Asn Leu Leu Ala Gly Thr Leu Ser Pro Ser Pro Ser
 180 185 190
 Pro Pro Pro Cys Ala Ala Thr Leu Gln Glu Leu Tyr Leu Ala Ser Asn
 195 200 205
 Ser Phe His Gly Ala Leu Pro Pro Thr Leu Phe Gly Leu Ala Ala Leu
 210 215 220
 Gln Lys Leu Ser Leu Ala Ser Asn Gly Leu Thr Gly Gln Val Ser Ser
 225 230 235 240
 Arg Leu Arg Gly Leu Thr Asn Leu Thr Ser Leu Asp Leu Ser Val Asn
 245 250 255
 Arg Phe Thr Gly His Leu Pro Asp Val Phe Ala Asp Leu Thr Ser Leu
 260 265 270
 Gln His Leu Thr Ala His Ser Asn Gly Phe Ser Gly Leu Leu Pro Arg
 275 280 285
 Ser Leu Ser Ser Leu Ser Ser Leu Arg Asp Leu Asn Leu Arg Asn Asn
 290 295 300
 Ser Phe Ser Gly Pro Ile Ala Arg Val Asn Phe Ser Ser Met Pro Phe
 305 310 315 320
 Leu Val Ser Ile Asp Leu Ala Thr Asn His Leu Asn Gly Ser Leu Pro
 325 330 335
 Leu Ser Leu Ala Asp Cys Gly Asp Leu Lys Ser Leu Ser Ile Ala Lys
 340 345 350
 Asn Ser Leu Thr Gly Gln Leu Pro Glu Glu Tyr Gly Arg Leu Gly Ser
 355 360 365
 Leu Ser Val Leu Ser Leu Ser Asn Asn Thr Met Arg Asn Ile Ser Gly
 370 375 380

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Ala Leu Thr Val Leu Arg Ala Cys Lys Asn Leu Thr Thr Leu Ile Leu
385 390 395 400

Thr Lys Asn Phe Val Gly Glu Asp Leu Pro Asp Asp Gly Ile Ala Gly
405 410 415

Phe Asp Asn Leu Glu Val Leu Ala Leu Gly Asp Cys Ala Leu Arg Gly
420 425 430

Arg Val Pro Glu Trp Leu His Gln Cys Lys Arg Leu Glu Val Leu Asp
435 440 445

Leu Ser Trp Asn Gln Leu Val Gly Thr Ile Pro Glu Trp Ile Gly Gln
450 455 460

Leu Asp Asn Leu Thr Tyr Leu Asp Leu Ser Asn Asn Ser Leu Val Gly
465 470 475 480

Glu Ile Pro Lys Ser Leu Thr Gln Leu Lys Ser Leu Val Thr Ala Arg
485 490 495

Arg Ser Pro Gly Met Ala Phe Thr Asn Met Pro Leu Tyr Val Lys His
500 505 510

Asn Lys Ser Thr Ser Gly Arg Gln Tyr Asn Gln Leu Ser Asn Phe Pro
515 520 525

Pro Ser Leu Phe Leu Asn Asp Asn Gly Leu Asn Gly Thr Ile Trp Pro
530 535 540

Glu Phe Gly Asn Leu Lys Glu Leu His Val Leu Asp Leu Ser Asn Asn
545 550 555 560

Ala Ile Ser Gly Ser Ile Pro Asp Val Leu Ser Arg Met Glu Asn Leu
565 570 575

Glu Val Leu Asp Leu Ser Ser Asn Asn Leu Ser Gly Ser Ile Pro Ser
580 585 590

Ser Leu Thr Asp Leu Thr Phe Leu Ser Lys Phe Ser Val Ala His Asn
595 600 605

His Leu Val Gly Pro Ile Pro Asn Gly Gly Gln Phe Phe Thr Phe Ser
610 615 620

Asn Ser Ser Phe Glu Gly Asn Pro Gly Leu Cys Arg Ser Ser Ser Cys
625 630 635 640

Asp Gln Asn Gln Pro Gly Glu Thr Pro Thr Asp Asn Asp Ile Gln Arg
645 650 655

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Ser Gly Arg Asn Arg Lys Asn Lys Ile Leu Gly Val Ala Ile Cys Ile
660 665 670

Gly Leu Val Leu Val Val Leu Leu Ala Val Ile Leu Val Asn Ile Ser
675 680 685

Lys Arg Glu Val Ser Ile Ile Asp Asp Glu Glu Ile Asn Gly Ser Cys
690 695 700

His Asp Ser Tyr Asp Tyr Trp Lys Pro Val Leu Phe Phe Gln Asp Ser
705 710 715 720

Ala Lys Glu Leu Thr Val Ser Asp Leu Ile Lys Ser Thr Asn Asn Phe
725 730 735

Asp Gln Ala Asn Ile Ile Gly Cys Gly Gly Phe Gly Leu Val Tyr Lys
740 745 750

Ala Tyr Leu Pro Asp Gly Thr Lys Ala Ala Val Lys Arg Leu Ser Gly
755 760 765

Asp Cys Gly Gln Met Glu Arg Glu Phe Arg Ala Glu Val Glu Ala Leu
770 775 780

Ser Gln Ala Gln His Lys Asn Leu Val Ser Leu Arg Gly Tyr Cys Arg
785 790 795 800

Tyr Gly Asn Asp Arg Leu Leu Ile Tyr Ser Tyr Met Glu Asn Asn Ser
805 810 815

Leu Asp Tyr Trp Leu His Glu Arg Ser Asp Gly Gly Tyr Met Leu Lys
820 825 830

Trp Glu Ser Arg Leu Lys Ile Ala Gln Gly Ser Ala Arg Gly Leu Ala
835 840 845

Tyr Leu His Lys Asp Cys Glu Pro Asn Ile Ile His Arg Asp Val Lys
850 855 860

Ser Ser Asn Ile Leu Leu Asn Glu Asn Phe Glu Ala His Leu Ala Asp
865 870 875 880

Phe Gly Leu Ala Arg Leu Ile Gln Pro Tyr Asp Thr His Val Thr Thr
885 890 895

Asp Leu Val Gly Thr Leu Gly Tyr Ile Pro Pro Glu Tyr Ser Gln Ser
900 905 910

Val Ile Ala Thr Pro Lys Gly Asp Val Tyr Ser Phe Gly Val Val Leu
915 920 925

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Leu Glu Leu Leu Thr Gly Arg Arg Pro Met Asp Val Ser Lys Ala Lys
 930 935 940

Gly Ser Arg Asp Leu Val Ser Tyr Val Leu Gln Met Lys Ser Glu Lys
 945 950 955 960

Lys Glu Glu Gln Ile Phe Asp Thr Leu Ile Trp Ser Lys Thr His Glu
 965 970 975

Lys Gln Leu Phe Ser Val Leu Glu Ala Ala Cys Arg Cys Ile Ser Thr
 980 985 990

Asp Pro Arg Gln Arg Pro Ser Ile Glu Gln Val Val Ala Trp Leu Asp
 995 1000 1005

Ser Val
 1010

<210> 128
 <211> 24
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 <213> Deschampsia antarctica

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<400> 128

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Gly Xaa Leu Xaa Xaa Leu Xaa Xaa
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<400> 129

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 1 5 10 15

Gly Xaa Leu Xaa Xaa Leu Xaa Xaa
 20

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 <211> 26
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 <213> Synthetic primer

<400> 130
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<210> 131
 <211> 24
 <212> DNA
 <213> Synthetic primer

<400> 131
 gcatcctgca cggacatatc atta 24

<210> 132
 <211> 28
 <212> DNA
 <213> Synthetic primer

<400> 132
 gttacataag acgattggcc ccaccaag 28

<210> 133
 <211> 27
 <212> DNA
 <213> Synthetic primer

<400> 133
 caatccactc actgatcatt aaccacc 27

<210> 134
 <211> 24
 <212> DNA
 <213> Synthetic primer

<400> 134
 gatgctatat ccacgaagtt acat 24

<210> 135
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 <212> DNA
 <213> Synthetic primer

<400> 135
 attggcccca ccaagtga 18

<210> 136
 <211> 26
 <212> DNA
 <213> Synthetic primer

<400> 136
 aagcagtggg aacaacgcag agtggg 26

<210> 137
 <211> 33
 <212> DNA

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<213> Synthetic primer

<400> 137

cagcttgat ccatggcgaa ctgctgtctg cta

33

<210> 138

<211> 33

<212> DNA

<213> Synthetic primer

<400> 138

actcacaagc ttaacctcct gtcacgactt tgt

33

<210> 139

<211> 33

<212> DNA

<213> Synthetic primer

<400> 139

aggagaggat ccatggcgcg taccaaacag acc

33

<210> 140

<211> 33

<212> DNA

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